-- 96. (New) A superconductive method for causing electric-current flow in a superconductive state at a temperature in excess of 26 K, comprising:

(a) providing a superconductor element made of a superconductive composition, the superconductive composition consisting essentially of a rare earth - alkaline earth copper-oxide compound having a layer-type perovskite-like crystal structure, the composition having a superconductor transition temperature T_c of greater than 26 K;

(b) maintaining the superconductor element at a temperature above 26 K and below the superconductor transition temperature T_c of the superconductive composition; and

(c) causing an electric current to flow in the superconductor element.

97. (New) The superconductive method according to claim 96 in which the copper-oxide compound of the superconductive composition includes at least one rare-earth or rare-earth-like element and at least one alkaline-earth element.

98. (New) The superconductive method according to claim 97 in which the rare-earth or rare-earth-like element is lanthanum.

99. (New) The superconductive method according to claim 97 in which the alkaline-earth element is barium.

100. (New) The superconductive method according to claim 96 in which the copper-oxide compound of the superconductive composition includes mixed valent copper ions.

101. (New) The superconductive method according to claim 100 in which the copper-oxide compound includes at least one element in a nonstoichiometric atomic proportion.

102. (New) The superconductive method according to claim 101 in which oxygen is present in the copper-oxide compound in a nonstoichiometric atomic proportion.

103. (New) A superconductive method for conducting an electric current essentially without resistive losses, comprising:

(a) providing a superconductor element made of a superconductive composition, the superconductive composition consisting essentially of a copper-oxide compound having a layer-type perovskite-like crystal structure, the copper-oxide compound including at least one rare-earth or ~~rare-earth-like~~ IIIB element and at least one alkaline-earth element, the composition having a superconductive/resistive transition defining a superconductive/resistive-transition temperature

range between an upper limit defined by a transition-onset temperature T_c and a lower limit defined by an effectively-zero-bulk-resistivity intercept temperature $T_{\rho=0}$, the transition-onset temperature T_c being greater than 26 K;

(b) maintaining the superconductor element at a temperature below the effectively-zero-bulk-resistivity intercept temperature $T_{\rho=0}$ of the superconductive composition; and

(c) causing an electric current to flow in the superconductor element.

104. (New) The superconductive method according to claim 103 in which the rare-earth or rare-earth-like element is lanthanum.

105. (New) The superconductive method according to claim 103 in which the alkaline-earth element is barium.

106. (New) The superconductive method according to claim 103 in which the copper-oxide compound of the superconductive composition includes mixed valent copper ions.

107. (New) The superconductive method according to claim 106 in which the copper-oxide compound includes at least one element in a nonstoichiometric atomic proportion.